

What is claimed is:

1. A damper valve comprising:

a hollow casing including a first port connected to a hydraulic pump side and a second port connected to a hydraulic actuator side;

a valve sleeve which divides the casing into a first chamber communicating with the first port and a second chamber communicating with the second port and includes a plurality of communicating passages communicating the first chamber with the second chamber;

a spool relatively movable with respect to the valve sleeve in an axial direction provided at the first chamber;

a spring for urging the spool toward the second chamber;

a supply port for supplying hydraulic oil, supplied to the first chamber through the first port, to the second chamber through the spool and the valve sleeve;

a one-way valve provided in the supply port for allowing the hydraulic oil to flow from the first port to the second port and inhibiting the hydraulic oil from flowing from the second port to the first port;

a reflux port which leads the hydraulic oil from the second chamber to the first damper through the communicating passage; and

a valve member for covering openings of the communicating passages which face the first chamber, wherein the valve member is elastically deformed by a low flow rate of the hydraulic oil flowing from the second chamber to the first chamber and when a flow rate of the hydraulic oil flowing from the second chamber to the first chamber exceeds a predetermined value, the valve member is moved with the spool against urging force of the spring to widely open the openings of the communicating passages.

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2. The damper valve according to claim 1, wherein the valve member is an annular member surrounding the spool, and an inner circumference of the annular member is held between the valve sleeve and the spool.

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3. The damper valve according to claim 2, wherein a gap is formed between an outer circumference portion of the valve member and the openings of the communicating passages.

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4. The damper valve according to claim 3, wherein an annular projection to which the valve member is abutted is formed at an end surface of the valve sleeve to form the gap.

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5. The damper valve according to claim 3, further comprising a shim interposed between the valve member and an end surface of the valve sleeve to form the gap.

5 6. The damper valve according to claim 3, wherein the valve member includes a step portion to form the gap.

7. The damper valve according to claim 2, wherein an end surface of the valve sleeve which faces the valve member
10 is formed with an annular groove communicating with the openings of the communicating passages.

8. The damper valve according to claim 7, wherein a gap is formed between an outer circumference portion of the
15 valve member and a bottom surface of the annular groove.

9. The damper valve according to claim 7, wherein an outer circumference portion of the valve member contacts with the valve sleeve to close the openings of the
20 communicating passages.

10. The damper valve according to claim 1, wherein the damper valve is provided in a predetermined hydraulic circuit disposed between an output port of the hydraulic
25 control valve and the hydraulic actuator.